

What is claimed is:

1. A semiconductor laser, comprising:
a laser-stripe portion;
a first site in a swelled shape on the laser-stripe portion;

5 and

a second site, disposed in the surroundings of the first site, having a swelled shape higher than the first site.

2. A semiconductor laser, comprising:

a substrate;

10 a surface on a side opposite to the substrate;
a laser-stripe portion formed on the substrate;
resonator surfaces formed at both ends of the laser-stripe portion; and

15 a site, disposed in a neighborhood of at least one of the resonator surfaces, swelling up to a position higher than a height of a upper portion of the laser-stripe portion which upper portion is the surface on the side opposite to the substrate.

3. A semiconductor laser, comprising:

a first conductivity type substrate;

20 a first conductivity type cladding layer formed on the first conductivity type substrate;

an active layer formed on the first conductivity type cladding layer;

25 a second conductivity type cladding layer formed on the active layer;

a second conductivity type ridge-stripe optical waveguide formed on the second conductive cladding layer; and

a second conductivity type protrusion formed on the second

conductivity type cladding layer and disposed in a region other than the second conductivity type ridge-stripe optical waveguide.

4. A semiconductor laser as set forth in claim 3:

wherein the second conductivity type protrusion is a second 5 conductivity type ridge-stripe disposed in parallel with the second conductivity type ridge-stripe optical waveguide.

5. A semiconductor laser as set forth in claim 4:

wherein the second conductivity type protrusion is shorter in its stripe length than that of the second conductivity type 10 ridge-stripe optical waveguide.

6. A semiconductor laser as set forth in claim 3, further comprising:

a first conductivity type current blocking layer formed on the second conductivity type cladding layer so as to cover the 15 second conductivity type protrusion and disposed in a region other than the second conductivity type ridge-stripe optical waveguide.

7. A semiconductor laser as set forth in claim 3, further comprising:

20 a front reflective coating for protecting at least one end of the second conductivity type ridge-stripe optical waveguide; and

25 a rear reflective coating that protects at least the other end of the second conductivity type ridge-stripe optical waveguide and is higher in reflectance than the front reflective coating.

8. A semiconductor laser as set forth in claim 3:

wherein the first conductivity type substrate is formed of 26 GaAs;

the cladding layers are formed of InGaAlP; and
the active layer is formed in an InGaAlP system multiple
quantum well structure.

9. A method of fabricating a semiconductor laser,
5 comprising:

forming a first conductivity type cladding layer on a first
conductivity type substrate;

forming an active layer on the first conductivity type
cladding layer;

10 forming a second conductivity type cladding layer on the
active layer;

forming a second conductivity type semiconductor layer on
the second conductivity type cladding layer;

15 patterning to form a dielectrics film on the second
conductivity type semiconductor layer;

forming a second conductivity type ridge-stripe optical
waveguide and a second conductivity type protrusion on the second
conductivity type cladding layer by etching the second
conductivity type semiconductor layer with the patterned
20 dielectrics film as a mask;

removing the patterned dielectrics film that is formed on
the second conductivity type protrusion;

stacking a first conductivity type semiconductor layer with
the patterned dielectrics film that is formed on the second
25 conductivity type ridge-stripe optical waveguide, as a mask; and

stacking a second conductivity type contact layer after
removing the patterned dielectrics film that is formed on the
second conductivity type ridge-stripe optical waveguide.

10. A method of mounting a semiconductor laser that comprises a substrate; a surface on a side opposite to the substrate; a laser-stripe portion formed on the substrate; resonator surfaces formed at both ends of the laser-stripe portion; and a site disposed in a neighborhood of at least one of the resonator surfaces and swelling up to a position higher than a height of a upper portion of the laser-stripe portion which upper portion is the surface on the side opposite to the substrate, on a laser chip mounting surface, the method comprising:

10 positioning the surface on the side opposite to the substrate facing to the laser chip mounting surface; and fixing the positioned state.